

# **BLM Sensitive Species Report for Vegetation**

**Threatened, Endangered, and BLM Sensitive Plant Species Report  
For Energy Fuels Resources Corporation - Sheep Mountain Uranium Project**

Legal Description: T28N, R92W, Sections 16, 17, 20-22, 27-29, 32, and 33

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**Introduction:**

The Sheep Mountain Project Area is located within T28N, R92W, Sections 16, 17, 20-22, 27-29, 32, and 33, totaling approximately 3,605.55 acres. The soils within the project area are generally coarse loamy and primarily formed from weathered sedimentary bedrock consisting mainly of sandstone. The two major vegetation communities present within the Sheep Mountain Project Area include Limber Pine-Big Sagebrush and Sagebrush-Grass. The vegetation communities are named for the 1980 WDEQ permit for the mine site. The minor vegetation community is Reclaimed Grassland. There are also large portions of disturbance within the project area.

There are several proposed disturbance areas, within the Sheep Mountain Project Area. The proposed disturbance areas total approximately 666.1 acres, of which, approximately 63% has been previously disturbed by past mining activities. Within the proposed disturbance areas activities associated with the uranium mining process will occur and include pit disturbances, spoil piles, and a heap leach area. Pit disturbances will occur within the Congo Pit, West Congo Pit Extension, Paydirt Pit, and the North Gap Pit. There are two proposed spoil piles: the West Spoils and the South Spoils. There are two alternative locations for the heap leach disturbance areas: the Paydirt Heap Leach (alternative one) and the McIntosh Pit (alternative two). The primary vegetation community present in the Congo Pit and West Congo Pit Extension areas, affected by the proposed mining activities, is the Sagebrush-Grass; however, smaller areas of the Limber Pine-Big Sagebrush, Reclaimed Grassland, and disturbance areas are also present and will be affected. The other pit disturbances, spoil piles, and heap leach locations will primarily affect the Sagebrush-Grass, Reclaimed Grassland, and disturbance areas.

The Limber Pine- Big Sagebrush vegetation community had approximately 41% vegetative cover and is dominated by *Pinus flexilis* (limber pine), *Artemisia tridentata* (big sagebrush), *Artemisia nova* (black sagebrush), *Chrysothamnus viscidiflorus* (Douglas rabbitbrush), *Purshia tridentata* (antelope bitterbrush), *Elymus spicata* (bluebunch wheatgrass), *Festuca idahoensis* (Idaho fescue) and *Poa* species (bluegrass). The Sagebrush-Grass vegetation community had approximately 37% vegetative cover and is dominated by big sagebrush, black sagebrush, *Ericameria nauseosusa* (rubber rabbitbrush), and Douglas rabbitbrush. The Reclaimed Grassland vegetation community had approximately 40% vegetative cover and is dominated by *Hesperostipa comata* (needleandthread), *Elymus trachycaulus* (slender wheatgrass), *Elymus smithii* (western wheatgrass), and *Elymus lanceolatus* (thickspike wheatgrass).

Two threatened and endangered species were surveyed for: *Penstemon haydenii* (blowout penstemon) and *Spiranthis diluvialis* (Ute ladies'-tresses). The Bureau of Land Management (BLM) Lander Field Office (LFO) listed 11 sensitive plant species, as of March 2010.

**Methodology:**

BKS Environmental Associates, Inc. (BKS), of Rock Springs, Wyoming, conducted threatened, endangered, and BLM sensitive plant species surveys in June, July, and August 2010. BKS used recreational grade GPS units (accuracy 3 to 15 meters) to mark any areas of potential habitat and individuals or populations of BLM sensitive plant species. BKS contacted the Wyoming Natural Diversity Database (WYNDD) to determine if any threatened, endangered, or BLM sensitive plant species occurred within the project area. Natural Resource Conservation Service (NRCS) soil map units were overlay on 2006 National Aerial Imagery Program (NAIP) true color ortho aerial imagery to

determine areas of potential habitat, based on soil characteristics, for threatened, endangered, and BLM sensitive plant species. Field surveys utilized both vehicular and pedestrian reconnaissance to determine potential habitat and species presence. Table 1 lists the BLM sensitive species and their habitat and phenology, as well as, an explanation of habitat potential in project area.

Table 1: BLM Sensitive Species and Explanation of Potential Habitat in Project Area						
Common Name	Scientific Name	Habitat Characteristics	Soils	Phenology	Explanation of Potential Habitat	
Meadow Pussytoes	<i>Antennaria arcuata</i>	Moist, hummocky meadows, seeps or springs surrounded by sage/grasslands 4,950-7,900'	Clayey soils with high organic matter	July-September	Surveyed for in August in conjunction with <i>Spiranthes diluvialis</i> surveys. No habitat or individuals were found within the project area.	
Porter's Sagebrush	<i>Artemisia porteri</i>	Sparsely vegetated badlands of ashy or tuffaceous mudstone and clay slopes 5,300-6,500'	Semi-barren, low desert shrub. Dry, whitish, ashy-clay hills, gravelly-clay flats, Wagon Box Formation	June-July	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.	
Dubois Milkvetch	<i>Astragalus gilviflorus</i> var. <i>purpureus</i>	Barren shale, badlands, limestone, redbed slopes, and ridges 6,900-8,800'	Sandy-clay soils. Soils mostly derived from the Tertiary Wind River or Indian Meadows formations. Cretaceous Cody Shale, Triassic Chugwater, Dinwoody formations, Paleozoic limestone, gravelly moraines.	Late May - Early July	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.	
Cedar Rim Thistle	<i>Cirsium aridum</i>	Barren, chalky hills, gravelly slopes, and fine textured, sandy-shaley draws 6,700-7,200. Found within openings in big sagebrush grasslands. Also found in bunchgrass or cushion plant communities	Split Rock, White River, Wagon Bed, Wind River, Green River, and Wasatch formations	June-July	Surveyed for in June and July. No individuals or habitat found within the project area.	

Table 1: BLM Sensitive Species and Explanation of Potential Habitat in Project Area Continued					
Owl Creek Miner's Candle	<i>Cryptantha subcapitata</i>	Sandy-gravelly slopes and desert ridges on sandstones of the Winds River Formation 4,700-6,000'. Occurs within the sparsely vegetated cushion plant communities	Sandstones and conglomerates derived from the Eocene Wind River formations. Some limestones	Late May-June or Mid June to mid July	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.
Fremont Bladderpod	<i>Lesquerella fremontii</i>	Meadows, slopes, ridges, and benches in desert foothill, montane meadow, or alpine cushion plant communities on rocky, mesic, limestone derived soils. Rocky limestone slopes and ridges 7,000-9,000'	Limestone derived soils	May-July	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.
Beaver Rim Phlox	<i>Phlox pungens</i>	Sparsely vegetated cushion plant communities. slopes on sandstone, siltstone, or limestone substrates 6,000-7,400'	Limestone, volcanic rich sandstone, siltstone, or red-bed clays	May - June	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.
Rocky Mountain Twinpod	<i>Physaria saximontana</i> var. <i>saximontana</i>	Sparsely vegetated rocky slopes of limestone, sandstone or clay 5,600-8,300'	Sandy, gravelly soils, talus of limestone, red sandstone, or clay	May-Late June	Surveyed for in June. Habitat present within the project area, and within the proposed road disturbance. No individuals were found within the project area.

Table 1: BLM Sensitive Species and Explanation of Potential Habitat in Project Area Continued

Limber Pine	<i>Pinus flexilis</i>	Timberline and at lower elevation with sagebrush. Associated species are Rocky Mountain lodgepole pine, Engelmann spruce, whitebark pine, Rocky Mountain Douglas-fir, subalpine fir, Rocky Mountain juniper, Mountain Mahogany, and common juniper			Surveyed for in June. Habitat and populations present within the project area and within the disturbance areas.
Persistent Sepal Yellowcress	<i>Rorippa calycina</i>	Found primarily along moist sandy to muddy banks of streams, stock ponds, and man-made reservoirs near the high-water line at 3660-6800 feet. Most populations are in semi-disturbed or recently flooded openings in small inlets or bays		Late May - August	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.
Barneby's Clover	<i>Trifolium barnebyi</i>	Ledges, crevices, and seams on reddish -cream Nugget Sandstone outcrops 5,600-6,700'	Reddish cream Nugget Sandstone	May-July	Habitat characteristics not found within the project area. No individuals or habitat found within the project area.

Field reconnaissance surveys for BLM sensitive plant species were conducted in June, July, early August, and late August, 2010, to ensure surveys for all plant species were conducted during peak flowering periods. Field reconnaissance surveys were conducted for all BLM listed sensitive plant species, with efforts focused on limber pine, *Physaria saximontana* var. *saximontana* (Rocky Mountain twinpod), and blowout penstemon on June 22, 2010. Limber pine and Rocky Mountain twinpod, both BLM sensitive plant species, were surveyed for in areas that had sandy and gravelly soils. Areas to consider as potential habitat, for blowout penstemon, should be at least 100 feet from top to bottom, have relatively fine sandy soils three feet in depth, and vegetation cover no greater than 30%. The presence of ant hills, sagebrush on the ridge of the slope, coarse sand, coarse fragments, and indicators of water vs. wind erosion indicate the area should not be considered potential habitat. Habitat and species surveys for Ute ladies'-tresses, *Antennaria acuata* (meadow pussytoes), and resurveying of limber pine populations were conducted on August 2 and 3, 2010. Pedestrian reconnaissance was conducted along the southern edge of the project area near the pond and drainage for Ute ladies'-tresses and meadow pussytoes.

In June 2011 BKS conducted tree density counts for the limber pine using the point center quarter method and measured distances from point to plant for a maximum of 50 feet. This method was used to estimate the total number of trees per acre within the limber pine habitat areas. BKS also used 2009 NAIP imagery to count the number of trees within the disturbance areas.

### **Results:**

No threatened or endangered plant species or species habitats were found within the project area. No BLM sensitive plant species or threatened and endangered plant species records, for the project area, were found in the WYNDD database (February 2011). Sandy soils within the project area had greater than 30% ground cover, excluding the sandy areas as potential habitat for blowout penstemon. No habitat or individuals or populations of Ute ladies'-tresses were present within the project area. The banks of the pond located in Section 32 and 33 were dominated by *Hordeum jubatum* (foxtail barley), *Carex stenophylla* (needleleaf sedge), and *Carex nebrascensis* (Nebraska sedge). The soil was clay, the water was stagnant, and there was no transition zone between the water and the mesic area of the banks. All of these characteristics are negative indicators for Ute Ladies'-tresses habitat. The drainage leading into the pond in Section 32 from Section 33 did not have water present, thus the lack of a late season water source excludes this area as potential Ute Ladies'-tresses habitat.

The following nine, of the 11 listed BLM sensitive plant species, were not present within the project area and do not have potential habitat within the project area: *Antennaria acuata* (meadow pussytoes), *Artemisia porteri* (Porter's sagebrush), *Astragalus gilviflorus* var. *purpureus* (Dobois milkvetch), *Cirsium aridum* (Cedar rim thistle), *Cyrtanthe subcapitata* (Owl Creek miner's candle), *Lesquerella fremontii* (Fremont bladderpod), *Phlox pungens* (beaver rim phlox), *Rorippa calycina* (persistent sepal yellowcress), and *Trifolium barnebyi* (Barneby's clover). Potential habitat for the above listed species was determined non-existent based on habitat characteristics, primarily the lack of appropriate soil characteristics, topography, or vegetation communities.

Two of the 11 BLM sensitive plant species had potential habitat within the project area. Limber pine habitat and individuals were present within the project area and within the proposed disturbance areas. Rocky Mountain twinpod potential habitat was present in the project area, but not within the proposed

disturbance area. Photos of habitat and species present within the project area are located in Addendum A and a map of the potential habitat and populations are located in Addendum B.

### *Pinus flexilis* (Limber pine)

#### Habitat Characteristics:

Limber pine habitat is located anywhere from 5,250 feet to 11,000 feet in the Rocky Mountains. The species is often found on steep rocky slopes that do not support other vegetation types. The soil parent materials are derived from many types including: sandstone, limestone, granite, serpentine, quartzite, shale, obsidian, pumice, and calcareous substrates. The species grows in cold environments and is acclimated to high wind speeds.

#### Threats:

Often times limber pine communities are found at the edge of sagebrush and grassland communities, the limber pine is often managed by cutting to prevent encroachment into these other communities. The encroachment is thought to occur due to wildfire suppression. Limber pines are also affected the following insect and disease agents: Rocky Mountain pine beetle (*Dendroctonus ponderosae*), white pine blister rust (*Cronartium ribicola*), and limber pine dwarf mistletoe (*Arceuthobium cyanocarpum*) (Means 2010). These insect and disease agents are the leading causes of limber pine decline in the Rocky Mountains.

White pine blister rust is one of the most destructive diseases of five needle pines in North America (Maloy 2001). The fungus cannot spread from tree to tree but requires an alternative host. The host is the *Ribes* sp (currants and gooseberries). The first and often most overlooked symptom is a red or yellow dot on the needles. This occurs shortly after the infestation. The first noticeable sign of infestation is a slightly swollen branch. As the disease progresses, the swollen area will become a canker. The cankers have a distinctive orange color (Maloy 2003). This is evident in photos 7 and 8 in Addendum B. Once a branch is girdled the needles will begin to turn red which is the first indication of disease within the stand. If the rust occurs on the main stem it will eventually girdle and kill the tree. (Maloy 2001)

#### Site Specific Information:

Limber pine was found throughout the project area and within the disturbance boundary, but most of the individuals were mainly in the central portion of the project area. The disturbance boundaries do not contain large areas of the Limber Pine-Big Sagebrush Grassland community. Limber pine and *Juniperus osteosperma* (Utah juniper) both occur within the community. Approximately 53.92 acres of habitat and 614 individuals of limber pine occur within the disturbance areas; however, large areas, approximately 1,101.49 acres of the Limber Pine-Big Sagebrush vegetation community are present outside of the disturbance boundary. This approximation was determined by aerial photography.

In June 2011 Limber Pine Big Sagebrush areas were sampled using the Point center quarter method. Ten point center quarter locations were taken within the community, thus forty samples total. Two species of trees were identified within the area: limber pine and Utah juniper. Limber pine had an approximate density of 17.89 trees per acre, while the Utah juniper had approximately 1.90 trees per acre. White pine blister rust was evident on the limber pine trees within the stands surveyed. Many of the trees were

succumbing to the infestation and in poor health. Approximately 90% of the trees observed were suffering from the white pine blister rust. The limber pines within the disturbance boundaries were infected with white pine blister rust.

In the 1980s, during the baseline study for this mine site, Limber pine was identified and rough species counts were determined. The 1980s study area included the current Congo Pit disturbance area and associated haul roads. Results of the baseline study indicated approximately 146 Limber pine individuals were present in the study area. The mean DBH was 15.6 cm and the range was 4.0 cm to 30.7 cm. The mean height was 4.4 meters and the range was 2.1 to 9.1 meters.

*Physaria saximontana* var. *saximontana* (Rocky Mountain Twinpod)

Habitat Characteristics:

Rocky Mountain twinpod occurs on “sparsely vegetated slopes on sandy, gravelly soils, rocky rims and outcrops, shale-siltstone, conglomerate bedrock, or talus of limestone, red sandstone (Chugwater formation), or clay between 5,200 and 8,850 feet” (Glisson 2004). The species is often found on dry south facing slopes, but can be found on any aspect. The species is often found surrounded by the limber pine/juniper vegetation community. The associated species are limber pine, Utah juniper, Douglas rabbitbrush, big sagebrush, and black sagebrush (WYNDD 2003).

Known Populations and Habitat in the Area:

In Wyoming, Rocky Mountain twinpod is known to occur from the Wind River Basin to the southern Big Horn Basin. It is known from 21 extant occurrences in Wyoming, 15 of which have been relocated since 1990 (Glisson 2004). The population of this species in Wyoming is greater than 14,400. There is a known population, reported in 1995, on Sheep Mountain. There are three small colonies present with an estimate of 100 plants in one colony (WYNDD 2003b, Glisson 2004). The colonies occur around 6,950 feet in sandstone, limestone, and redbeds, in the Chugwater Formation, the slope aspect is west, and the slopes are sparsely vegetated (WYNDD 2003). The WYNDD Occurrence Rank is good (WYNDD 2003).

Threats:

The threats to Rocky Mountain twinpod include environmental climate change variables and surface disturbance activities including: mining, road and pipeline construction, and off-road vehicle use. Livestock is typically not a threat, as the habitat that the species grows in is not typically utilized for livestock grazing.

Site Specific Information:

The project area contains suitable potential habitat, generally located on sparsely vegetated slopes or islands within the Limber Pine-Big Sagebrush vegetation community in Sections 27, 28, and 33. There is about 119.71 acres of potential habitat within the project area. Within that total acreage, 1.95 acres of potential habitat is within the road disturbance boundary south of Sheep 2 Shaft in Section 28.

**Discussion:**

Limber pine has habitat and individuals present within the project and disturbance areas. Individuals within the disturbance areas are likely to be disturbed and/or killed due to mining activities; however, the number of individuals affected within the disturbance boundary is less than the number of individuals located within the project boundary outside of the disturbance areas that will not be affected by the mining activities. Rocky Mountain twinpod potential habitat is present within the project area, but outside the disturbance areas. It is at the discretion of the Lander BLM office to make effects determination for both species.

**References:**

Glisson, B. 2004, *Physaria saximontana* Rollins var. *saximontana* (Fremont County twinpod): A Technical Conservation Assessment. [Online]. USDA Forest Service, Rocky Mountain Region, <http://www.fs.fed.us/r2/projects/scp/assessments/physariasaximontanavarsaximontana.pdf> (March 2011)

Kendall, K. 1997. Limber Pine Communities [Homepage of High Elevation White Pines]. US Forest Service, [http://www.fs.fed.us/rm/highelvationwhite\\_pines/index.htm](http://www.fs.fed.us/rm/highelvationwhite_pines/index.htm) (March 2011)

Means, Robert E. Synthesis of Lower Treeline Limber Pine (*Pinus flexilis*) Woodland Knowledge, Research Needs, and Management Considerations. USDOE Bureau of Land Management. Wyoming State Office, (August 2010)

Maloy, O. C. 2001. White pine blister rust. Online. Plant Health Progress doi:10.1094/PHP-2001-0924-01-HM.

Maloy, O.C.. 2003. White pine blister rust. The Plant Health Instructor. DOI:10.1094/PHI-I-2003-0908-01 Updated 2008.

Wyoming Natural Diversity Database (WYNDD). 2003, Research from the Glisson report regarding *Physaria saximontana* Rollins var. *saximontana* (Fremont County twinpod).

Wyoming Natural Diversity Database (WYNDD). 2011, Data compilation for C. Adams, completed February 21, 2011. Unpublished report. Wyoming Natural Diversity Database, University of Wyoming, Laramie, Wyoming.

**ADDENDUM A**  
**PHOTOGRAPHS**

Photo 1: Limber Pine-Big Sagebrush Community. Located in the west half of Section 26. Potential *Physaria saximontana var. saximontana* habitat.



Photo 2: Limber pines in the background. Located southwest of Sheep 2 Shaft.



Photo 3: No blowout penstemon habitat. Potential *Physaria saximontana* var. *saximontana* habitat. Located in the southwest portion of Section 28.



Photo 4: Reclaimed Grassland- Located in the North Gap Pit



Photo 5: Poned area in the southeast corner of project area. No *Spiranthes diluvialis*



habitat.



Photo 6: General view of Limber Pine Stands observed during the 2011 survey



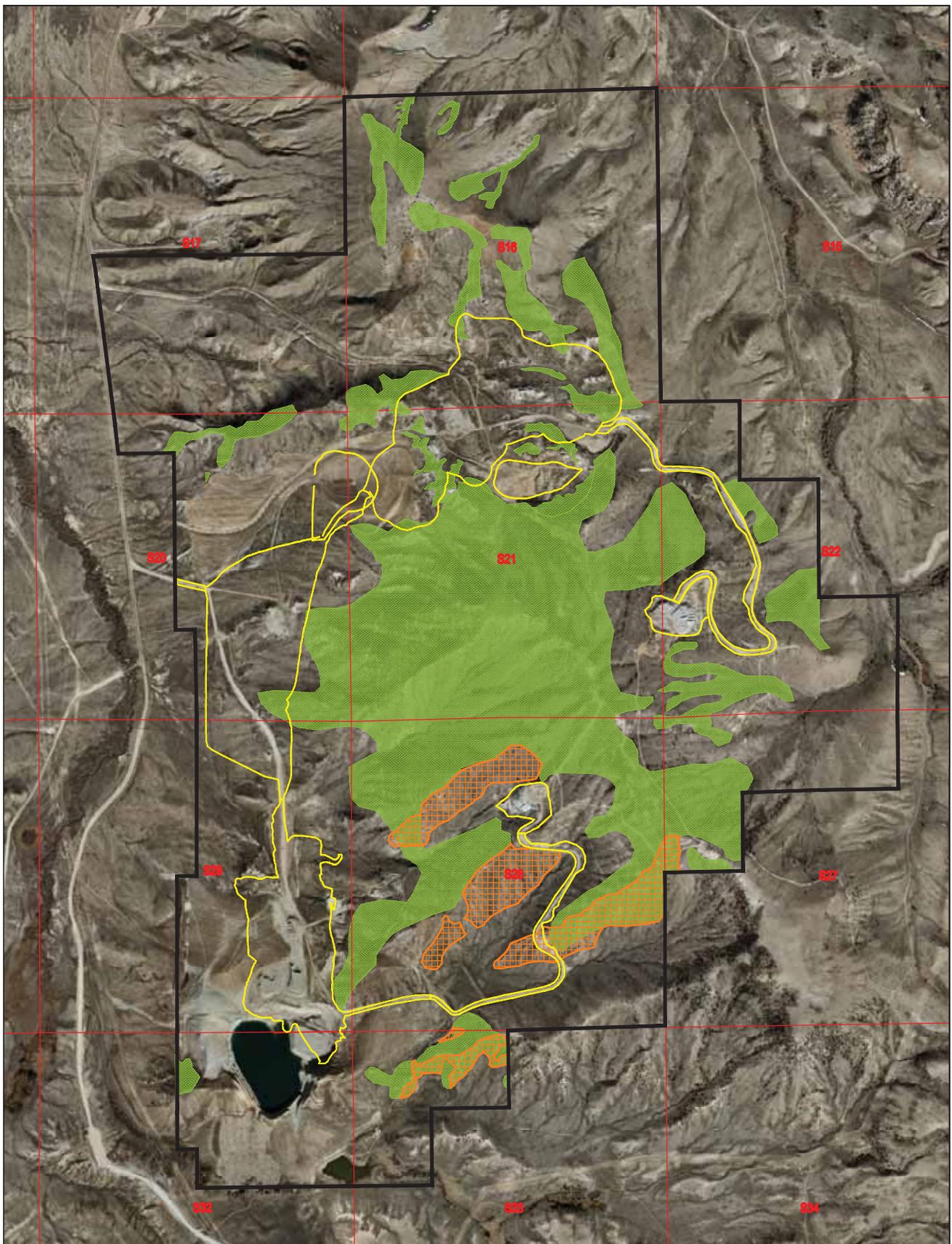
Photo 7: Evidence of Blister rust observed during the 2011 Limber Pine Surveys.



**Photo 8:** Evidence of Blister rust observed during the 2011 Limber Pine Surveys.

**Addendum B**

**Map**

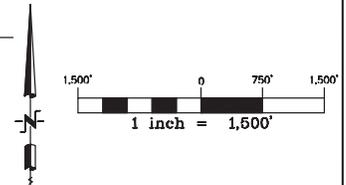


**LEGEND**

-  SECTION LINE
-  PERMIT BOUNDARY
-  MAXIMUM EXTENT OF SURFACE DISTURBANCE

**VEGETATION**

-  LIMBER PINE POPULATIONS AND HABITAT
-  ROCKY MOUNTAIN TWINPOD POTENTIAL HABITAT



**BLM SENSITIVE SPECIES**  
 SCALE: 1" = 1500' DATE:  
 DRAWN BY: CDS 5/9/11

**SHEEP MOUNTAIN MINES  
 MINE PERMIT 381C**

REVISION DATE: 07/16/12  
 CAD FILENAME:  
 DWG. NUMBER: D8.1



# **Legal Description of 381C Permit and Amendments**

# **Legal Description of 381C Permit and Amendments**

WESTERN NUCLEAR, INC.

APPENDIX C

LEGAL DESCRIPTION OF CROOKS GAP TOTAL  
PERMIT AREA

381 C	Acres
Sec 16 - All	640
Sec 20 - E $\frac{1}{2}$	320
Sec 21 - All	640
Sec 22 - NW $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$	340
Sec 27 - N $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ NE $\frac{1}{4}$	160
Sec 28 - All	640
Sec 29 - E $\frac{1}{2}$	320
Sec 32 - N $\frac{1}{2}$ NE $\frac{1}{4}$	80
Sec 33 - N $\frac{1}{2}$ NW $\frac{1}{4}$	80
Total	<u>3220</u>

A-1

Sec 29 - E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	10
Sec 32 - E $\frac{1}{2}$ E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$ NE $\frac{1}{4}$	95
Sec 33 - SW $\frac{1}{4}$ NW $\frac{1}{4}$	40
Total	<u>145</u>

A-2

Sec 17 - S $\frac{1}{2}$ SE $\frac{1}{4}$	80
Total	<u>80</u>

A-3

Sec 29 - E $\frac{1}{2}$ E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$	10
Total	<u>10</u>

Permit No. W.N.C. T. A1, A2, A3 + A5

Temporary Filing No. 2176



MICRO FILMED DEC 18 1991

MICRO FILMED NOV 13 '89

WESTERN NUCLEAR, INC.

APPENDIX C

CROOKS GAP PERMIT AREA

LEGAL DESCRIPTION OF A-S AMMENDMENT



A parcel of land located in the SE $\frac{1}{4}$  and the SW $\frac{1}{4}$  of Section 17 and in the NW $\frac{1}{4}$  of Section 20, T28N, R92W, 6th PM, Fremont County, Wyoming more particularly described as follows:

The point of beginning being the Northeast corner of said tract and also the east quarter corner of Section 17.

- Thence proceed S 89-59'-58" W, 4236.63 feet to a brass survey cap;
- Thence S 8-21'-15" E, 292.00 feet to a brass survey cap;
- Thence S 6-44'-00" E, 2569.02 feet to a brass survey cap;
- Thence S 5-52'-36" E, 482.38 feet to a brass survey cap;
- Thence N 89 59'31" E, 936.39 feet to a " rebar and survey cap;
- Thence S 00-00'-35" W, 87.54 feet to a " rebar and survey cap;
- Thence S 00-02'-37" W, 2882.49 feet to a "rebar and survey cap;
- Thence S 89-57'-23" E, 330.11 feet to a "rebar and survey cap;
- Thence N 00-39" E, 2162.60 feet to a "rebar and survey cap;
- Thence N 00-00'-32" W, 807.50 feet to a brass survey cap;
- Thence N 00-04'-59" E, 129.05 feet to a brass survey cap;
- Thence N 00-00'-11" E, 375.29 feet to a brass survey cap;
- Thence N 00-00'-14" E, 155.64 feet to the South  $\frac{1}{4}$  corner of Section 17;
- Thence N 00-00'-13" W, 1319.78 feet to a "rebar and survey cap;
- Thence S 89-59'-35" E, 404.96 feet to a " rebar and survey cap;
- Thence N 89-37'-21" E, 2182.47 feet to a "rebar and survey cap;
- Thence N 00-24'-28" W, 1325.45 feet to the point of beginning.

Said parcel contains 212.52 acres.

MICRO FILMED DEC 18 1991

Permit No. 291C of A1, A2, A3, A5

Temporary Filing No. 2/96



MICRO FILMED NOV 13 '89